UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,982	08/30/2001	Hiroshi Arakawa	16869P-031600US	1364

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EXAMINER
LAZARO, DAVID R

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 12/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 June 2002*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

 a)☒ All b)☐ Some * c)☐ None of:

  1.☒ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____.

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
   application from the International Bureau (PCT Rule 17.2(a)).

 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date *08/30/01*.

4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 12172004

DETAILED ACTION

1.   Preliminary Amendment filed 06/03/02.

2.   Claims 11-15 added.

3.   Claims 1-15 are pending in this Office Action.

Priority

4.   This application the benefit of JAPAN 2001-095789 (03/29/2001).

5.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which

papers have been placed of record in the file.

Information Disclosure Statement

6.   The information disclosure statement (IDS) submitted on 08/30/01 has been

considered by the examiner.

Claim Objections

7.   Claim 1 is objected to because of the following informalities: In line 9, "secured

resources and routes" should be "the secured selected resources and selected routes",

for clarity and consistency. Appropriate correction is required.

8.   Claim 2 is objected to because of the following informalities: In line 2, "the

plurality of resources and routes so secured" should be "the secured selected resources

and selected routes" for clarity and consistency. Appropriate correction is required.

9.   Claim 3 is objected to because of the following informalities: In lines 2-, "the

secured plurality of resources and routes" should be "the secured selected resources

and selected routes" for clarity and consistency. Appropriate correction is required.

Claim Rejections - 35 USC § 101

10.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. Claim 10 describes a program having a

computer function for backing up data using selected resources and routes that are

secured to execute backup processing to form a plurality of backup subsystems.

However, descriptions and expressions of a program having a computer function (what

the examiner considers to be equivalent to a computer-executable program product) not

encoded on a computer readable medium do not define any structural and functional

interrelationships between the computer program and other claimed elements of a

computer which permit the computer program's functionality to be realized (See MPEP

2106.IV.B.1(a)). Therefore Claims 10 is directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

11.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12.   Claims 1-3, 6, 9-11, 13 and 14 rejected under 35 U.S.C. 102(e) as being

anticipated by U.S. Patent 6,704,849 by Steegmans (Steegmans).

13.   With respect to Claim 1, Steegmans teaches A backup processing method for

backing up data to be used by a data- processing computer system (Col. 1 lines 8-16),

the method comprising the steps of: selecting resources in a usable state from a

plurality of resources necessary for backing up data, the data to be used by the data-

processing computer system (Col. 4 lines 53 - Col. 5 line 15, Col. 5 lines 62-67 -

particularly the selection of the data to be backed up and the back-up servers to be

used); selecting switches in a usable state from a plurality of switches necessary for

forming routes among the selected resources (Col. 5 lines 1-15, Col. 6 lines 14-41 -

particularly the establishing of the connections, such as VA-VBA1); determining which

of the selected resources and selected routes are secure (Col. 5 lines 1-15 - particularly

the log-on procedure with a backup server on a established connection); and executing

backup processing by using selected resources and routes when the resources and

routes necessary for backing up data to be used in data processing by the computer

system are secured, to thereby form a plurality of backup subsystems by the selection (Col. 4 lines 53 - Col. 5 line 15 and Col. 6 lines 14-36).

14.   With respect to Claim 2, Steegmans teaches all the limitations of Claim 1 and further teaches wherein backup processing is executed by using the plurality of resources and routes so secured (Col. 4 lines 53 - Col. 5 line 15 and Col. 6 lines 14-36), and when the backup processing has been successfully executed by at least one subsystem, regarding the backup processing as successful (Col. 5 lines 1-15 - When data is successfully backed up to a backup server, such as BA1, it is inherent that the backup to that server was successful.).

15.   With respect to Claim 3, Steegmans teaches all the limitations of Claim 1 and further teaches wherein data is attempted to be backed up by at least one subsystem of the secured plurality of resources and routes, and if a problem occurs during the backup processing, continuing the backup processing using other resources and routes (Col. 5 lines 1-15 - The backup stream to backup server BA1 is independent of the backup stream to BA2. Thus, if a problem occurred with the stream to BA1, the backup stream to BA2 would continue.).

16.   With respect to Claim 6, Steegmans teaches all the limitations of Claim 2 and further teaches a step of storing information relating to the backup processing of the backed-up data (Col. 6 lines 42-54).

17.   With respect to Claim 9, Steegmans teaches a backup processing system for backing up data to be used by a data-processing computer system (Col. 1 lines 8-16), the system comprising: a resource selection processor for selecting resources in a

usable state from a plurality of resources necessary for the backup of data (Col. 4 lines

53 - Col. 5 line 15, Col. 5 lines 62-67 - particularly the selection of the data to be backed

up and the back-up servers to be used); a route selection processor for selecting

switches in a usable state from a plurality of switches to form routes among the selected

resources (Col. 5 lines 1-15, Col. 6 lines 14-41 - particularly the establishing of the

connections, such as VA-VBA1); and a backup processor for executing backup

processes using the selected resources and the selected routes necessary for backing

up data, giving preference to those resources and routes which are secured (Col. 4

lines 53 - Col. 5 line 15 and Col. 6 lines 14-36).

18.   With respect to Claim 10, Steegmans teaches a program having a computer

function as a backup processing system for backing up data to be used by a data-

processing computer system (Col. 1 lines 8-16), the program comprising: a resource

selection processor portion for selecting resources in a usable state from a plurality of

resources necessary for the backup of data to be used in data processing by the

computer (Col. 4 lines 53 - Col. 5 line 15, Col. 5 lines 62-67 - particularly the selection of

the data to be backed up and the back-up servers to be used); a route selection

processor portion for selecting switches in a usable state from a plurality of switches for

forming routes among the selected resources (Col. 5 lines 1-15, Col. 6 lines 14-41 -

particularly the establishing of the connections, such as VA-VBA1); and a backup

processor portion for executing backup processing by using the selected resources and

routes when the resources and routes necessary for backing up data to be used in data

processing by the computer are secure to thereby form a plurality of backup

subsystems (Col. 4 lines 53 - Col. 5 line 15 and Col. 6 lines 14-36).

19.   With respect to Claim 11, Steegmans teaches a method for performing a data

backup operation comprising: identifying a data storage resource from among a plurality

of data storage resources (Col. 4 lines 53 - Col. 5 line 15, Col. 5 lines 62-67); identifying

a data communication channel resource from among a plurality of data communication

channel resources (Col. 5 lines 1-15, Col. 6 lines 14-41); and performing a first backup

operation of data in a computer system using the data storage resource and data

communication channel resource so identified (Col. 4 lines 53 - Col. 5 line 15 and Col. 6

lines 14-36).

20.   With respected to Claim 13, Steegmans teaches identifying another data storage

resource from the plurality of data storage resources (Col. 4 lines 53 - Col. 5 line 15,

Col. 5 lines 62-67); identifying another data communication channel resource from the

plurality of data communication channel resources (Col. 5 lines 1-15, Col. 6 lines 14-

41); and performing another backup operation using the other data storage resource

and data communication resource so identified concurrently with the first backup

operation (Col. 4 lines 53 - Col. 5 line 15 and Col. 6 lines 14-36).

21.   With respect to Claim 14, Steegmans teaches in a computer system, a method

for backing up data comprising: performing a first backup operation using a first set of

resources to backup first data contained in the computer system (Col. 4 lines 53 - Col. 5

line 15 and Col. 6 lines 14-36); performing a second backup operation using a second

set of resources to backup the first data (Col. 4 lines 53 - Col. 5 line 15 and Col. 6 lines

14-36); and performing the first backup operation concurrently with performing the

second backup operation, thus providing redundancy in the backup operation to

increase the likelihood of a successful backup operation (Col. 4 lines 53 - Col. 5 line 15

and Col. 6 lines 14-41).

Claim Rejections - 35 USC § 103

22.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

23.   Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Steegmans in view of "Implementation of a Campus-wide Distributed Mass Storage

Service: The Dream vs. Reality", published by IEEE, 1995, by Armstead et al.

(Armstead).

24.   With respect to Claim 4, Steegmans teaches all the limitations of Claim 3 and

further teaches wherein the backup processing includes a step of executing a backup

instruction command (Col. 5 line 56 - Col. 6 line 3, Col. 6 lines 14-36). Steegmans does

not explicitly disclose a problem in backup processing is detected by a result of the

execution of the backup command. Armstead teaches a problem in a backup process

can be detected by a result of the execution of a backup instruction command (page

196 - 'Monitor CPU/Network Performance' section). It would have been obvious to one

of ordinary skill in the art at the time the invention was made to take the method

disclosed by Steegmans and modify it as indicated by Armstead such that the method

further comprises wherein a problem in backup processing is detected by a result of the

execution of the backup command. One would be motivated to have this as there is

need to quickly identify and diagnose networking problems in a backup system (page

196 of Armstead - 'Monitor CPU/Network Performance' section).

25.   With respect to Claim 5, Steegmans in view of Armstead teaches all the

limitations of Claim 4 and further teaches wherein data to be backed up is processed by

being copied at least two times in response to the backup command (Col. 5 lines 1-15

and Col. 6 lines 14-36 of Steegmans).

26.   Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Steegmans in view of U.S. Patent 6,804,690 by Dysert et al. (Dysert).

27.   With respect to Claim 7, Steegmans teaches all the limitations of Claim 2 but

does not explicitly disclose a step of storing information relating to whether the backup

processing of the backed-up data was successfully executed. Dysert teaches a step of

storing information relating to whether the backup processing of the backed-up data

was successfully executed (Col. 8 lines 24-40). It would have been obvious to one of

ordinary skill in the art at the time the invention was made to take the method disclosed

by Steegmans and modify it as indicated by Dysert such that the method further

includes a step of storing information relating to whether the backup processing of the

backed-up data was successfully executed. One would be motivated to have this as

backups are performed frequently and there is need for knowing what has been backed

up and can be restored (Col. 1 lines 25-38 and Col. 8 lines 24-40 of Dysert).

28.   With respect to Claim 8, Steegmans in view of Dysert teaches all the limiations of

Claim 7 and further teaches wherein data stored relating to the successful execution of

the backup processing is used to determine if the data can be restored (Col. 8 lines 24-

40 of Dysert).

29.   Claims 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Steegmans in view of U.S. Patent 5,832,197 by Houji (Houji).

30:     With respect to Claim 12, Steegmans teaches all the limitations of Claim 11 and

further teaches identifying a data storage resource from a plurality of data storage

resources (Col. 4 lines 53 - Col. 5 line 15, Col. 5 lines 62-67), identifying a data

communication channel resource from a plurality of data storage resources (Col. 5 lines

1-15, Col. 6 lines 14-41) and performing a backup operation using the identified data

storage resource and data communication resource (Col. 4 lines 53 - Col. 5 line 15 and

Col. 6 lines 14-36). Steegmans does not explicitly disclose this identifying and

performing being in response to detecting a failure in operation. Houji teaches

identifying secured resources of a communication path in response to detecting a failure

in a data transfer operation such that the operation can be continued (Col. 3 line 51 -

Col. 4 line 16). It would have been obvious to one of ordinary skill in the art at the time

the invention was made to take the method disclosed by Steegmans and modify it as

indicated by Houji such that the method further includes detecting a failure in the

backup operation and in response thereto identifying another data storage resource from the plurality of data storage resources, identifying another data communication channel resource from the plurality of data communication channel resources and performing another backup operation using the other data storage resource and data communication resource so identified. One would be motivated to have this as there is need to reliably backup data (Col. 1 lines 17-40 of Steegmans).

31. With respect to Claim 15, Steegmans teaches all the limitations of Claim 14 and further teaches performing multiple operations using different sets of resources (Col. 5 lines 14-41). Steegmans does not explicitly disclose performing at least a third backup operation using a third set of resources in response to detecting an occurrence where a first and second set of resources do no perform a successful backup operation. Houji teaches that in response to detecting the occurrence of a failed data transfer operation, additional sets of resources can be used to perform the data transfer operation (Col. 3 line 41 - Col. 4 line 16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Steegmans and modify it as indicated by Houji such that the method further includes detecting an occurrence where the first backup operation and the second backup operation do not perform a successful backup operation, and in response thereto, performing at least a third backup operation using a third set of resources. One would be motivated to have this as there is need to reliably backup data (Col. 1 lines 17-40 of Steegmans).

Conclusion

32.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

33.   U.S. Patent 6,831,898 by Edsall et al. "Multiple Packet Paths to Improve reliability in an IP Network" December 14, 2004. Discloses the general concept of sending packet data along multiple paths for redundancy. Focuses on VOIP application.

34.   U.S. Patent 5,673,381 by Huai et al. "System and Parallel Streaming and Data Stripping to Back-Up a Network" September 30, 1997. Discloses backup of client data through a parallel push process to the backup server. Storage devices are organized into groups, with a group being a destination. When a storage device fills in a given group, another storage device in the group will replace it in cascading fashion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lazaro whose telephone number is 571-272-3986. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

David Lazaro
December 20, 2004

BHARAT BAROT
PRIMARY EXAMINER